

Docket No: H1598Serial No. 10/772,830REMARKS

Claims 1-21 are pending in the application. Claim 1 is amended herein. For the reasons which follow, Applicant respectfully requests reconsideration of the application, withdrawal of the asserted rejections, and allowance of the claims.

Amendment of Specification

The specification has been amended to correct several typographical errors. The paragraphs at page 5 have been amended to correct "patterned" to "pattern", and to correctly identify the trenches depicted in Fig. 2B by the reference numbers 208, as is shown in Fig. 2B. The fact that the trenches 208 are referred to here is shown by the reference to Fig. 2B and by the introduction of the trenches 212 in the first paragraph on page 7 with reference to Fig. 2C, which shows trenches 212.

Similarly, the change in the paragraph at page 6 is merely the correction of an obvious typographical error, because there is no photoresist 208a shown in Fig. 2C, while there is a layer 206a shown not only in Fig. 2C but also in Figs. 2D and 2E.

Similarly, the change in the paragraph at page 7 is merely the correction of an obvious typographical error, in which "sidewall spaces" clearly should be "sidewall spacers".

Applicant submits that the amended specification contains no new matter.

Amendment of Claims

Claim 1 is amended to specify that in the patterning the conforming layer to form at least one sidewall spacer, the patterning anisotropically removes substantially all of the conforming layer from surfaces other than the at least one edge. Support for this amendment may be found, for example, at page 7, lines 29-31 and in Fig. 2D and Fig. 2E. Applicant submits that the amended claims contain no new matter.

Docket No: H1598Serial No. 10/772,830Rejection of Claims 1-7 under 35 U.S.C. § 103(a)

Claims 1-5 and 7 stand rejected as obvious over Chung et al., U.S. Patent No. 6,750,150 B1, in view of Trivedi, U.S. Patent No. 6,548,401 B1. Claim 6 stands rejected as obvious over Chung et al. in view of Trivedi and further in view of Denton et al., U.S. Patent No. 5,217,749.

Applicant traverses the rejections of claims 1-7 on the contended basis for at least the following reasons.

As noted above, Applicant has amended independent claims 1-7 to specify that, in the patterning the conforming layer to form at least one sidewall spacer, the patterning anisotropically removes substantially all of the conforming layer from surfaces other than the at least one edge. These claims fully distinguish the presently claimed invention over Chung et al. in view of Trivedi, with or without Denton et al.

Chung et al. clearly regards as very important the retention of the material 150 on the top surface of the photoresist 130, i.e., on surfaces other than the at least one edge or sidewall. Specifically, Chung et al. discloses at col. 3, lines 57-65, that the thickness "a" is equal to or greater than the thickness "b". In both Fig. 2 and Fig. 3, Chung et al. show the retention of a significant and substantial thickness of the layer 150 on surfaces other than the at least one edge.

As stated by the Examiner, Trivedi is cited only to show that it is well known to remove sidewall spacers.

Therefore, the cited portions of Chung et al. in view of Trivedi fail to disclose all the features of Applicant's claimed invention, and there is no statement of a *prima facie* case of obviousness of Applicant's claimed invention.

With respect to the combination of Chung et al. in view of Trivedi or further in view of Denton et al., Applicant respectfully submits that this rejection fails for the same reasons set forth above with respect to Chung et al. in view of Trivedi, and fails because there is nothing in Denton et al. that would disclose or suggest the modification required to obtain the disclosed method. The asserted combination fails to disclose all the features of Applicant's claimed invention.

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Accordingly, Applicant respectfully submits that the presently pending claims 1-7 distinguish over the prior art in general and Chung et al. in view of Trivedi or further in view of Denton et al. in particular.

Rejection of Claims 8-21 under 35 U.S.C. § 103(a)

Claims 8-12, 14-19 and 21 stand rejected as obvious over Joyner, U.S. Patent No. 6,228,747 B1, in view of Mahoney, U.S. Patent No. 4,163,828, and Chung et al. Claims 13 and 20 stand rejected as obvious over Joyner in view of Mahoney and Denton.

Applicant traverses the rejections of claims 8-21 on the contended bases for at least the following reasons.

The Examiner contended that Joyner discloses all the features of the claimed invention, but admitted that Joyner fails to disclose a composition other than parylene or "other organic material". The Examiner cited Mahoney to show that parylene is poly-*p*-xylylene. The Examiner contended that this disclosure "would include compounds very similar to (if not exactly the same as) those recited in the current claim." The Examiner cited Chung et al. which utilizes a material similar to that claimed in a manner similar to that disclosed by Joyner. Thereupon, the Examiner concluded that it would have been obvious to

modify Joyner by specifically reciting organic compounds similar to (if not understood to be) parylene, because Joyner specifies that the conformal layer can be parylene or other organic material, where Mahoney shows that parylene may very well include the recited compositions and Chung teaches that at least one of the claimed compounds is ideal to incorporate into a process similar to that disclosed by Joyner.

Applicant respectfully submits that the Examiner has failed to state a legally correct *prima facie* case of obviousness, that the best that can be said about the contended combination is that it is no more than an "obvious to try" situation, and that therefore the presently claimed

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invention of claims 8-21 would not have been obvious over the contended combination. There are a number of reasons in support of this.

First, Joyner discloses nothing more than parylene "or other organic material" without ever disclosing or even suggesting what possible "other organic material" might be included. That is, at no time does Joyner make any suggestion whatsoever as to any other organic material that might be substituted for parylene. In fact, given the ubiquitous use of parylene in the electronics arts, there would be no reason for anyone to look beyond Joyner for any other organic material.

The Examiner cited Mahoney to show that "parylene is a generic term applied to the family of unsubstituted and substituted poly-p-xylylenes". At col. 1, Mahoney depicts the chemical structures of the unsubstituted and substituted poly-p-xylylenes. Mahoney discloses that the substituent may be any organic or inorganic group that can be substituted on aromatic nuclei. Col. 1, lines 48-49.

However, the Examiner clearly erred in contending that "such polymers [as parylene] would include compounds very similar to (if not exactly the same as) those recited in the current claims." This statement is clearly erroneous because the materials recited in the current claims are not the same as or similar to parylene. As any chemist knows, poly-p-xylylene contains aromatic benzene rings (the hexagonal structures shown in column 1 of Mahoney) as a major component of the polymer backbone structure. Furthermore, as any chemist knows, such aromatic benzene rings are not and cannot be obtained by polymerizing the materials recited in the current claims. It simply cannot happen. In addition, as any chemist knows, a polymeric backbone structure such as poly-p-xylylene cannot be obtained by polymerizing the materials recited in the current claims. This, too, simply cannot happen.

Furthermore, the Examiner clearly erred in contending that "Mahoney shows that parylene may very well include the recited compositions". First, the Examiner failed to cite any such disclosure in Mahoney. Second, Applicant is aware of no such disclosure. Third, and most relevant, as any chemist knows, parylene may not even possibly include the recited

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compounds. This is simply factually incorrect. The recited compounds could not and would not yield parylene in any known polymerization reaction.

Given the disclosure of Mahoney cited by the Examiner, the best that any person would get from the disclosures of Joyner and Mahoney is that the "other organic materials" mentioned but not specified by Joyner would include nothing more than the substituted parylenes disclosed by Mahoney. A person would have no motivation to look beyond these references. That is, neither Joyner nor Mahoney would provide a person of skill in the art with any motivation to look beyond the "other organic materials", i.e., substituted or unsubstituted parylene, disclosed therein.

Furthermore, the Examiner clearly erred in contending that "Chung teaches that at least one of the claimed compounds is ideal to incorporate into a process similar to that disclosed by Joyner". First, the Examiner failed to cite any such disclosure in Chung et al. and Applicant is aware of none. Second, this statement is factually incorrect. Chung et al. teaches one of the claimed compounds. And, Chung teaches use of such compound in a process that is similar to that of Joyner. But Chung et al. at no time makes the connection, and Chung et al. at no time discloses, suggests or provides any other motivation to look to Joyner for any reason.

Chung et al. do disclose materials similar to some of those currently claimed. However, Chung et al. consistently refer to the layer formed by these materials as "inorganic". At only one point in Chung et al. does the word "organic" appear. Otherwise, Chung et al. consistently disclose, and claim, the material to form the sidewall layer as "inorganic". For this reason, it is not at all likely that a person of skill in the art would look to Chung et al. for "other organic materials", particularly when there was no motivation to seek such materials beyond Joyner and Mahoney.

Chung et al. at no time mentions parylene. Chung et al. at no time suggests that the materials disclosed therein would make a suitable "other organic material" for use in the method of Joyner.

Thus, Chung et al. provides no motivation for modifying the method of Joyner.

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In setting forth the rejection, the Examiner failed to identify any proper motivation for making the contended selection of features, combination and modifications necessary to reach the currently pending claims. The Examiner failed to do anything more than contend that, given the presence of these materials in the prior art, it would have been obvious to combine them. Such "motivation" is no motivation at all in the obviousness context. There must be the legally requisite quantum of some teaching, suggestion or motivation to select and combine the references relied upon as evidence of obviousness. The courts have repeatedly stated that the factual inquiry whether to combine references must be thorough and searching and must be based on objective evidence. Applicant respectfully submits that the Examiner has failed to adduce the requisite evidence in the present case. For these reasons, Applicant respectfully submits that the Examiner failed to state a *prima facie* case of obviousness of the presently claimed invention of claims 8-21.

Finally, Applicant respectfully submits that the best the Examiner has shown might be an "obvious to try" situation. The person of skill in the art, having Joyner, Mahoney and Chung et al. in hand, might possibly think to modify the process of Joyner in view of Mahoney, by casting aside the art's well-known, well accepted and long-used parylene for an organic material other than substituted or unsubstituted parylene, and might consider it *obvious to try* the materials disclosed by Chung et al. However, *obvious to try* is not and never has been the standard for determination of obviousness. For this additional reason, Applicant respectfully submits that the Examiner failed to state a *prima facie* case of obviousness of the presently claimed invention of claims 8-21.

Accordingly, Applicant respectfully submits that the presently claimed invention of claims 8-21 would not have been obvious over the contended combination of Joyner, Mahoney and Chung et al.

As with the rejection of claims 1-7, the addition of Denton fails to remedy the shortcomings of the other references.

Docket No: H1598Serial No. 10/772,830**CONCLUSION**

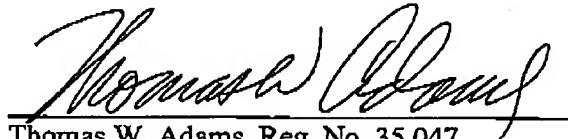
For the foregoing reasons, Applicant respectfully submits that all of the presently pending claims patentably distinguish over the prior art generally, and over Chung et al. in view of Trivedi or further in view of Denton et al., and over Joyner in view of Mahoney and Chung or further in view of Denton et al. in particular, and that Applicant's claims are therefore in condition for allowance. Applicant requests the Examiner to so indicate.

If the Examiner considers that a telephone interview would be helpful to facilitate favorable prosecution of this application, the Examiner is invited to telephone the undersigned.

No additional claims fees are believed due for the filing of this paper. However, if a fee is required, please charge the fee to Deposit Account No. 18-0988, Order No. H1598/AMDSPH1598US.

Respectfully submitted,

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